REVIEWS

Atmospheric Oxidation and Antioxidants. By GERALD SCOTT. American Elsevier Publishing Co., Inc., 52 Vanderbilt Ave., New York, N. Y. 10017, 1965. x + 528 pp. 17 × 24.5 cm. Price $26.

This book is concerned with the oxidative degradation of organic compounds. Particular emphasis is placed on underlying mechanisms of autoxidation and antioxidant action. It is a well-written book containing an abundance of clear figures (174) and tables (172). More than 1200 references are listed, almost half of which are less than 10 years old. A particularly useful feature is the designation of general review references and others that are complementary to text discussion. The well-arranged table of contents and extensive (over 1400 entries) subject index enhance the value of the book as a reference source.

The first part (Chapters 1–5) deals with fundamental studies in simple systems and the classification of antioxidants by their mechanisms. Modes of breakdown of peroxides are considered in relation to the autoxidative process. Data from kinetic studies are used to give information on reaction intermediates of the oxidative free radical chain mechanism. Effective use is made of illustrative thermo-chemical calculations in discussing reactivity of hydrocarbons toward oxygen.

The various mechanisms by which antioxidants interrupt the autoxidative chain are discussed on the basis of chemical and kinetic evidence. The author distinguishes two mechanistically distinct classes of antioxidants: (*a*) radical chain-breakers that remove species in the propagation step; (*b*) preventive agents that remove sources of free radicals (peroxide decomposers). Synergistic effects obtained by combining both kinds of antioxidants in a system are considered.

Chapters 6 to 10 demonstrate the application of concepts to technological systems of oils, polymers, and rubbers. Behavior of oxidizable materials and the techniques used in measurement of deterioration are described in terms of mechanisms. Stabilization of oxidizable hydrocarbons, plastics, and unsaturated compounds is described in detail. A brief review of vitamin autoxidation includes an interesting discussion of coupled oxidation of vitamin A acetate in methyl linoleate.

The critical discussion of accelerated aging tests for evaluating rubber is especially noteworthy in Chapter 9. It is pointed out that accelerated tests of materials that undergo oxidative degradation do not always reflect stability under actual use conditions.

This excellent book is remarkably free of errors. It is recommended highly to all who wish to learn more about atmospheric oxidation and antioxidants.

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The Mast Cells. By HANS SELYE. Butterworth, Inc., 7235 Wisconsin Ave., Washington, D. C. 20014, 1965. xxix + 498 pp. 17.5 × 25 25 cm. Price $19.75.

Dr. Selye provides, in a single volume, a detailed survey of the existing data and some previously unpublished observations on the mast cells. Much of the literature—more than 2500 references—published since discovery of the mast cell until the present has been abstracted and organized into 10 chapters: History, Definition and Terminology, Histology, Embryology, Comparative Anatomy, Agents Affecting Mast Cells, Diseases, Biochemistry, The Blood Basophil, and Theories. These chapters are subdivided into more specific sections.

The style of the book is such that it can be used to locate a specific point or to gain a general view of current knowledge. The author's critical evaluation of the literature and his own observations appear in narrative form at the beginning of the sections. The abstracts follow and are presented individually; they are further differentiated from the narrative by being printed in smaller type.

Among the author's unpublished work included in this book are his observations on organotropic mast-cell dischargers, the newly discovered phenomenon of "mastopexis" (the binding of foreign materials, especially metals, by mast cells), and the participation of mast cells in anaphylactoid inflammation, calciphylaxis, and calcergy.

NOTICES

Man and Africa. Ciba Foundation Symposium. Edited by G. WOLSTENHOLME and M. O'CONNOR. Little, Brown and Co., 34 Beacon St., Boston, Mass. 02106, 1965. xx + 400 pp. 14 × 21 cm. Price $7.50.

Medicinal Plant Alkaloids. 2nd ed. An Introduction for Pharmacy Students. By STEPHEN K. SIM. University of Toronto Press, Toronto, Ontario, 1965. xiii + 181 pp. 17.5 × 24 cm. Paperbound.

Kurzes Lehrbuch der Pharmakologie. By G. KUSCHINSKY and H. LULLMANN. Intercontinental Medical Book Corp., New York 16, N. Y., 1966. viii + 345 pp. 17.5 × 26 cm. Ganzleinen DM 33,--.

Physical Methods in Organic Chemistry. Edited by J. C. P. SCHWARZ. Holden-Day, Inc., 728 Montgomery St., San Francisco, Calif., 1964. xi + 350 pp. 15 × 23 cm. Price $9.75.

Introduction to Chemical Pharmacology. Second ed. By R. B. BARLOW. John Wiley & Sons, Inc., 605 Third Ave., New York, N. Y. 10016, 1964. viii + 452 pp. 15.5 × 24 cm. Price $13.